20061219.ba v03_n985.bam.20061219

>From ???@??? Mon Dec 18 21:11:14 2006 -0600
Date: Tue, 19 Dec 2006 02:47:38 GMT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 3985
Message-Id: <20061219024744.A55AD187AB1@srvr1.theporch.com>

BOATANCHORS Digest 3985

Topics covered in this issue include:

    by Robert Kemp <bkemp@bobkemp.com>
 19) Re: Audio Driven AGC
    by "Tom Rauch" <w8ji@contesting.com>
 20) Re: Audio Driven AGC
    by W7QHO@aol.com
 21) Re: Audio Driven AGC.
    by "Mark Shaum" <k9tr@dtnspeed.net>

Message-ID: <001a01c7215a$fd36f8c0$fce47443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Viking Ranger AC line fuse question
Date: Sat, 16 Dec 2006 13:40:20 -0800
MIME-Version: 1.0
Content-Type: text/plain;
    charset="Windows-1252"
Content-Transfer-Encoding: 7bit

> New Product News from- ELMENCO   New Fused Plug Updated Design- 3Pole
Plug
>   fuses for each pole- [poland?]   Elmenco recommends 1 amp for ground,
3amp for neutral
> and 5 amp for hot line. Elmenco says higher munber means better
protection. [maybe
> latex?]   Where can i buy one to try?
Russ.

Yeah, NEWS from 1953, no doubt. Sounds like something Rod Serling dreamed
up.

Latex? Are you referring to of lineman's HV safety gloves? ;-)

Arden Allen
KB6NAX

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Viking Ranger AC line fuse question
Date: Sat, 16 Dec 2006 22:07:57 +0000
Message-Id:
<121620062207.17699.45846E3D000227A2000045232160280741 9A0E00CC0D99@att.net>

I will leave the latex to your own imagination Arden-hi... many uses...Russ.

From: wb3fau@att.net

To: Old Tube Radios <boatanchors@theporch.com>
Subject: fuse plugs
Date: Sat, 16 Dec 2006 22:32:34 +0000
Message-Id:
<121620062232.5219.45847401000F3AF900001463216028074l9A0E00CC0D99@att.net>

Fuse the ground? What an intesting way to detect ground faults...

Message-ID: <001901c72172$de4b1780$9a30bb40@k9a1e1>
From: "John Gillespie" <jgillespie@porchlight.ca>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Mahlon Loomis patent 129,971
Date: Sat, 16 Dec 2006 19:30:30 -0500
MIME-Version: 1.0
Content-Type: text/plain;
charset="Windows-1252"
Content-Transfer-Encoding: 7bit

After commenting on Jerry Procs' mention of Loomis and the LRN aerial, I did some further digging into Loomis and his early inventions. I know this is way off topic alot, but something really hit me while reading the original patent.

In 1868, on two mountains 14 miles apart, he sent up an aerial kite up to an elevation of about 1500 ft. above sea level with copper wire leads on each mountain top. Each kite had a fine copper wire mesh on the underside attached to the copper wire tether. The "receive" set has a galvometer in between the antenna and ground. The "send" set is the same without the galvometer. He shorted the wires together in an "intelligent" pattern to signal the "receive" set.

With no batteries, when he connected the wires together the galvometer reacted 14 miles away. So how much power was he able to tap into. What are we talking under 1 volt, under 10 volts? This seems amazing even today. Apparently, back then there was even a telegraph line 400 miles long powered solely by kites tapping into the earths electromagnetic fields. Sounds like the perfect re-newable resource....

Any Comments.... John

Message-ID: <4584BD0B.2000607@ar88.net>
Date: Sat, 16 Dec 2006 22:44:11 -0500
From: Al Klase <al@ar88.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Mahlon Loomis patent 129,971
Content-Type: text/plain; charset=windows-1252; format=flowed
Content-Transfer-Encoding: 8bit

John Gillespie wrote:

>   ..... With no batteries, when he connected the wires together the galvometer
>reacted 14 miles away.   So how much power was he able to tap into. What
>are we talking under 1 volt, under 10 volts? This seems amazing even today.
>Apparently, back then there was even a telegraph line 400 miles long
>powered solely by kites tapping into the earths electromagnetic fields.
>Sounds like the perfect re-newable resource....
>
>
>
I attended a presentation on M.Loomis at the Antique Wireless
Association conference some years ago. The presenters speculated that
the DC potential difference between ground and 400ft. could be
sufficiently high to get corona discharge from the points in the grid on
the kite. Hence RF noise.

At the receiver end they had evidence that there was some additional
component beside a galvanometer that had the characteristics of a
magnetic detector. Clearly you'd need some non-linear device to detect
the RF.

This material was never published that I know of, and I don't recall the
names of the gentlemen involved, but they were reasonably convincing.

Does anyone have further info on this?

Regards,
Al

--
Al Klase ñ N3FRQ
Flemington, NJ
http://www.skywaves.ar88.net/

Date: Sat, 16 Dec 2006 23:27:52 -0500 (EST)
From: Jerry Proc <jerry7proc@yahoo.com>
Subject: Re: LRN Aerial (LORAN)
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <445793.29999.qm@web90610.mail.mud.yahoo.com>

Hi Herb,

The Loran 'A' site is mine.

I now find the LRN acronym has two accepted meanings, so I changed my web copy to read:

"According to Bowditch - The American Practical Navigator, LORAN was derived from the letters in the words LOng RAnge Navigation. If those three words are abbreviated, it becomes LRN, the exact term on the Frigate drawing. Prior to being called LORAN it was known as LRN as well but meaning "Loomis Radio Navigation" in honour of F.W. Loomis, Associate Director of MIT's Radiation Laboratory who had previously been the Head of the Physics Department at the University Illinois.

Locating an article published in MIT's "THE TECH" newspaper, Dec 5, 1967 saved the day since I had nothing to colloborate the meaning of LRN as found in Wikipedia.

By researching the term and relating it with several other clues on the River class frigate drawing, I was able to determine that LORAN 'A' was being installed on RCN ships by mid 1943 something previously unknown to me.

Whew! That one will last me for a while. It's similar to the time when I read that radar was originally called Radio Directing Finding! :-)

--- "Herbert M. Rosenthal" <herbrose@comcast.net> wrote:

> What a trip into the past! I followed Jerry's lead
> to Wikipedia and
> GOOGLE, and spent time reading the descriptions of A
> and C, for I had
> taught LORAN in Gooney birds at Mather AFB
> (Sacramento) in the early
> 1950s... several Aviation Cadets, each at his own
> table, the longwire

> unreeled (all sets coupled to the one antenna), and
> charts (and some
> Cadets barfing from turbulence) all over the
> place... I kept a few
> charts as souveniers for years, but they have
> disappeared.
>
> And I remember the sets would fail from overheating
> if left on
> continuously, so we turned them off after a fix and
> back on for the next
> fix... instructors carried (I think) spare 6SN7s or
> 6SL7s to swap
> out-feel for a cold tube-and swap it.
>
> Look at: http://www.jproc.ca/hyperbolic/loran_a.html
>
> for an excellent description of LORAN history and
> theory of operation
> (your site, Jerry?).
>
> Egads! Fifty plus years ago-it really does fly.
>
> Herb W5AN
>
> PS Never forgot to reel in the longwire, either,
> though it did happen
> more than once.
>
>
>
> Jerry Proc wrote:
>
> >Hello Everyone, <snip> <snip> ...
> >
> >
> >
>
>

--
Regards,
Jerry Proc
E-mail: jerry7proc@yahoo.com

Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

Message-ID: <4584CA9E.4070308@bellsouth.net>
Date: Sat, 16 Dec 2006 22:42:06 -0600
From: Ben Hall <kd5byb@bellsouth.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: The end
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

I still plan to learn it, too. :)

I'll just be on the HF bands a little faster than before now. Well,
maybe not, as I've still got to get my antenna farm planted and get the
BA's back into operating mode...

Man does have a one year old son really slow down the hobbies. ;)

thanks and 73,
ben, KD5BYB

WA3GIN in Alex. City, VA wrote:
> Our Radio Club will continue to teach Morse Code.
>

From: "Jose V. Gavila" <eb5agv@ctv.es>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "'Jose V. Gavila'" <eb5agv@ctv.es>
Subject: RE: The end
Date: Sun, 17 Dec 2006 13:14:46 +0100
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit
Message-Id: <20061217121456.D3F0DEABD3@tormenta.iti.upv.es>

Hello everybody!

I have been out of town for a couple days and on return my mailbox was literally
flooded wir CW related messsages from several lists!

I can say that I am among the people who likes CW but finds it is not good to
force people to learn it. In Spain, CW requirement was dropped some months ago

and, trust me, there is no more trash in the bands than before. And some very good radio operators are now using bands they were not allowed previously. Some people has become interested in HF radio now that there is no need to learn CW to use HF bands. This, in my book, is a good thing.

Yes, for sure _some_ operators could come from CB and use HF bands same 'special' way (although they need to pass an exam which prevent that move for some of them)... but, summing up, it has been a positive move in Spain and I guess also in other countries.

So, please, don't lit the flame yet. Let us join the HF bands and continue Amateur Radio going. Time will tell if this has been a wise move but, please, don't start a war among us.

With my greatest respects,

JOSE

---
 73 EB5AGV / EC5AAU - JOSE V. GAVILA
    La Canyada - Valencia (SPAIN) - Loc: IM99SM

 Vintage Radio: http://jvgavila.com
 Vintage Test Equipment: http://jvgavila.com/testeq.htm

 European Boatanchors List: http://groups.yahoo.com/group/euro_ba_swap

---
Date: Sun, 17 Dec 2006 08:41:37 -0500 (EST)
From: stuck in 50s <polepeeg@aa4rm.ba-watch.org>
Message-Id: <200612171341.kBHDfbfH003369@fracas.netboobie.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: WW2 JA Army Superhet

Anyone seen one b4?---->

  http://qsl.asti.net/SURP.03ba/

Builders sure did good work.

   Marty

From: ail0@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Mahlon Loomis patent 129,971
Date: Sun, 17 Dec 2006 20:26:45 +0000

Message-Id: <121720062026.7970.4585A805000671DE00001F222160376223CF04070E@att.net>

I don't know about magnetic waves, but I do know that in 1954 I helped set up a 'whistler" receiving station in Wendover, Utah for Stanford University. It had a long
wire antenna and the first time I touched it, I got one heck of a shock. Charges built up on the antenna every time a cloud passed by. We connected a resistor from antenna to ground to drain off the voltage so it would not damage either the equipment or us!
  Art K3HBA

From: ail0@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Fuse the ground??
Date: Sun, 17 Dec 2006 20:48:31 +0000
Message-Id:
<121720062048.23050.4585AD1F000C19B700005A0A2160376223CF04070E@att.net>

Yikes!!
 And here I always thought that the ground lead was there to keep you alive when you accidentally touched a metal screw head or some such thing. If you are worried about what your grounds are doing, put in a GFI (Ground Fault Interrupter) and let it do it's job.
 I once worked with an electrician who was installing a GFI in my garage. It kept tripping even with no load connected. It turned out the the "neutral" lead at that outlet came from an outlet inside the house and the "hot" lead came from the fuse box by a different path. The difference in path length caused enough unbalance to trip the GFI, even though it was only a dozen feet or so. We also were running a series of lines from one ceiling outlet to another. We discovered that the hot and neutral lines were transposed inside the outlet so we had to transpose them back in the wiring to keep the hot pins on the sockets in the proper positions.
 That's while I have one of those gizmos you plug into a socket to make certain that all of the wires are properly sorted out.
73's
  Art K3HBA

From: W7QHO@aol.com
Message-ID: <d01.4f68001.32b718d2@aol.com>
Date: Sun, 17 Dec 2006 17:04:02 EST
Subject: Re: Fuse the ground??
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;

boundary="part1_d01.4f68001.32b718d2_boundary"

--part1_d01.4f68001.32b718d2_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Did I miss something? Who was advocating ground line fuses?

Dennis D. W7QHO
Glendale, CA

--part1_d01.4f68001.32b718d2_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

--part1_d01.4f68001.32b718d2_boundary--

Message-ID: <006501c7223d$8d054230$c7e47443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Fuse the ground??
Date: Sun, 17 Dec 2006 16:40:08 -0800
MIME-Version: 1.0
Content-Type: text/plain;
     charset="Windows-1252"
Content-Transfer-Encoding: 7bit

> ....We discovered that the hot and neutral lines were transposed inside
the
outlet....

Gee, I can't imagine any how any "competent" electrician would do such a
thing!

My first experience with a GFI was in my present domicile during a prolonged
rain storm. Turned out there was a GFI circuit breaker in the service entry
box. Every time it rained heavily the lights would go out in the bathrooms.

Drove me nuts until I discovered an outside outlet was on the same ciruit.
Fixed the problem with ...., you guessed it, ...WD-40 :-)

Arden Allen
KB6NAX

Message-ID: <001801c7226f$e22a84a0$6b9c1f45@rtconline.com>
From: "Ken Hickman" <n5cm@rtconline.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Audio Driven AGC.
Date: Mon, 18 Dec 2006 06:43:53 -0000
MIME-Version: 1.0
Content-Type: text/plain;
    charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Fellows,

Can someone point me to an article about "audio driven agc". I have used it
for many years in the past and am
replicating a boatanchor station I had starting back in the early 50's.
(Still have some pesky problems with the
HQ-129-X).
 My memory ain't what it used to be, I'm afraid, and I want to set it up
again in an identical station layout.
I want to be sure I don't overlook anything.
Thanks a meg!
Take care,

Ken   N5CM

Message-Id: <7.0.1.0.2.20061218055654.024c4918@muohio.edu>
Date: Mon, 18 Dec 2006 06:16:24 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: "James C. Garland" <4cx250b@muohio.edu>
Subject: Re: Audio Driven AGC.
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 11:43 PM 12/17/2006, you wrote:
>Hi Fellows,
>
>Can someone point me to an article about "audio driven agc". I have used it
>for many years in the past and am
>replicating a boatanchor station I had starting back in the early 50's.
>

>Ken N5CM

Hi Ken,
I can't give you an article reference, but I have quite a bit of experience with audio-derived AGC, which was somewhat popular in the 60s and 70s. I'm not sure that's the same thing as "audio driven" AGC, but it's an interesting topic even if it's not.

The idea is to pick off the AGC voltage at the audio stage, after the signal has been filtered and detected. The AGC voltge is then used to control the gain of the previous IF and RF stages. There are a number of simple circuits for doing this, but the most interesting and advanced audio AGC circuit was an intergrated circuit made by Plessey Semiconductors, back in the late 60s. I believe there were two versions. The Plessey 620 was for receivers, and the Plessey 621 was for use in speech compressors. Both ICs had similar features.

THey were quite sophisticated. They featured a hang-type AGC, with hang time set by an external capacitor, They had a neat circuit for suppressing pops and static bursts and also for tracking slowly varying signals without "hanging" on them .I've still got one installed in a homebrew receiver and have used it for thirty years, and believe I have a 621 in my junk box somewhere.

In general, however, audio-derived AGC circuits have two disadvantages. FIrst, it's hard to get the attack time short enough to prevent pumping. SInce they operate at audio frequencies, attack times shorter than a few milliseconds are difficult.

Secondly, they only work on SSB and CW and can't be used for AM. The reaon for this is that an unmodulated AM signal produces no audio, no matter how strong it is, and thus its signal can't be used to generate an AGC voltage. Thus audio-derived circuits are only suitable for receivers that have product detectors and BFOs. In this limited application, they work well, but have largely been superseded by conventional IF-derived AGC circuits in recent decades.

73,

Jim Garland W8ZR

****
James C. Garland
102 Spur Ranch Road
Santa Fe, NM 87540

www.w8zr.net
****

Message-ID: <000301c722b2$26154640$8231bb40@k9a1e1>
From: "John Gillespie" <jgillespie@porchlight.ca>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Mahlon Loomis patent 129,971
Date: Mon, 18 Dec 2006 09:38:12 -0500
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Art and Al
    Thanks for the feedback. Was Stanford doing research into the causes of "Whistlers" back in 1954? Thats fascinating, I am somewhat familiar with whistlers myself as a past member of the Longwave Club of America. This Antenna you helped put up in 54, how big was it?
    From what I think I've read on the Mahlon Loomis experiments, I think he was tapping into static electric fields. When he closed the antenna to ground connection on the send set, he was draining the field of the static charges that affected the galvometer 14 miles away. From what little reading I've done, it looks like the "constant" used is about 100 volts per meter on a fair day, so a 400 foot antenna could see a potential way up there into the Kv's of static charges at I presume light currents.
     I also read that Bej. Franklin in the   1700's   built a static charge alarm in his home by placing an iron rod on his chimney with a wire (the thickness of a goose quil) run down into his room attached to a brass bell. He had another wire attached to ground, attached to another brass bell 12 inches away from the first. He then suspended a small brass ball between the bells on a silk thread. Apparently, when a large static charge was in the vicinity the bells would ring. Also, at times so much electric fire (his description) was jumping between the bells, that he described the charge as the thickness of his thumb and produced enough light to make it possible to pick up a pin from the hallway. It's a wonder he didn't burn his house down.   hihi..... John
    ps. there is apparently a letter available on the web where his wife wrote him asking for instructions on how to dismantle his experiment because she was terrified by it. no wonder.

----- Original Message -----
From: <ail0@att.net>
To: <jgillespie@porchlight.ca>; "Old Tube Radios" <boatanchors@theporch.com>
Sent: Sunday, December 17, 2006 3:26 PM
Subject: Re: Mahlon Loomis patent 129,971

> I don't know about magnetic waves, but I do know that in 1954 I helped set up a 'whistler" receiving station in Wendover, Utah for Stanford University. It had a long
> wire antenna and the first time I touched it, I got one heck of a shock. Charges built up on the antenna every time a cloud passed by. We connected a resistor from
> antenna to ground to drain off the voltage so it would not damage either the equipment or us!
>   Art K3HBA

Message-ID: <001d01c722be$36702bc0$eae47443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Audio Driven AGC
Date: Mon, 18 Dec 2006 08:04:29 -0800
MIME-Version: 1.0
Content-Type: text/plain;
     charset="Windows-1252"
Content-Transfer-Encoding: 7bit

To add to Jim's comments on the limited usefulness of audio derived AGC -

An IF derived AGC can be made to work properly for both diode detected AM and product detected SSB/CW signals. The RF envelope of any kind of signal contains the same level information as the resulting audio. Timing, i.e. attack and hang times, optimized for both AM and SSB/CW signals can be more easily obtained from rectified IF than from rectified audio. Buffering the IF signal to drive the AGC rectifier may be needed to prevent envelope distortion before detection.

Arden Allen
KB6NAX

Message-ID: <4586CE91.1070008@bobkemp.com>
Date: Mon, 18 Dec 2006 11:23:29 -0600
From: Robert Kemp <bkemp@bobkemp.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Hallicrafters SR400 Dial
Content-Type: text/plain; charset=us-ascii; format=flowed
Content-Transfer-Encoding: 7bit

Is anyone making the SR400 dials? I'm in need of the MC dial (I guess you'd call it)...the paint is flecking off the aluminum backing plate.
Bob

Message-ID: <019001c722db$024d48b0$660fa8c0@radioroom>
From: "Tom Rauch" <w8ji@contesting.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Audio Driven AGC
Date: Mon, 18 Dec 2006 14:30:34 -0500
MIME-Version: 1.0
Content-Type: text/plain;
     format=flowed;
     charset="Windows-1252";
     reply-type=original
Content-Transfer-Encoding: 7bit

To understand why audio derived AGC is worse than IF derived AGC, think about the waveform applied to the AGC detector.

At IF frequencies the detector has tens of thousands of cycles to work from to detect the voltage. This means the designer can use a very small "filter" cap on the detector output allowing much faster charging and decay times. At audio frequencies the period of one cycle is very long- meaning the energy storage cap filtering the AGC detector output has to be very large.

Say we have a rising signal on the receiver's input like CW. Say the rise time is 5mS. At 500kHz IF we have a sample of the amplitude of that rising edge taken every 2 microseconds (half wave rectifier) or 1 microsecond (full wave). We not only get a very good track of the rising edge, the filtering of RF out of the detector output is very easy and can be very fast. We have 5mS rise sampled and detected every 2 microseconds.

Now look at audio. Say the maximum audio frequency response to that point is 5kHz. Now we can only have a sample every 200 microseconds with a half wave detector, or every 100 microseconds with a full wave. The slow sample rate requires more filtering and will lag the actual rise much more. We have a 5mS rise sampled only every 0.2 mS, not good.

Also the further back in the receiver the larger the group delay time of signals from entry into the receiver. With narrow filters this already can be several milliseconds. The more poles and narrower the filters are, the more signal delay they add. If we add additional response delay by using an audio detector the AGC can fall far behind the actual signal hitting the early receiver stages. This is what causes leading edge "pops" and attack distortion. The Drake

R4C with narrow CW filters and AGC detected at 50kHz with a
halfwave detector is a good example of this flaw. It is
almost useless on CW with fast AGC settings when using
narrow filters.

73 Tom

From: W7QHO@aol.com
Message-ID: <c13.cf186cf.32b84ddd@aol.com>
Date: Mon, 18 Dec 2006 15:02:37 EST
Subject: Re: Audio Driven AGC
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_c13.cf186cf.32b84ddd_boundary"

--part1_c13.cf186cf.32b84ddd_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

In a message dated 12/18/06 11:32:02 AM, w8ji@contesting.com writes:

> To understand why audio derived AGC is worse than IF derived
> AGC, think about the waveform applied to the AGC detector.
>
> At IF frequencies the detector has tens of thousands of
> cycles to work from to detect the voltage. This means the
> designer can use a very small "filter" cap on the detector
> output allowing much faster charging and decay times. At
> audio frequencies the period of one cycle is very long-
> meaning the energy storage cap filtering the AGC detector
> output has to be very large. Etc., etc., ...
>

Well yes, all that's true but two or three audio derived AGC schemes I've
used over the years
actually worked quite well. Easy way to significantly improve the SSB
performance of many 40's and 50's receivers. Currently using it on my R390A,
full-wave bridge on the line output fed into the AGC line. Amount of AGC
controlled by the line output control on the front panel. No switching, extra
caps or
internal modifications required. Works FB.

Yes, there are much more sophisticated schemes that offer faster attack times, broader ranges of control, no "pumping" on strong signals, etc., etc., if one has the time and wants to go to the trouble (which I will probably do one day).

Merry Christmas all.

Dennis D. W7QHO
Glendale, CA

--part1_c13.cf186cf.32b84ddd_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

--part1_c13.cf186cf.32b84ddd_boundary--

Message-ID: <00ee01c72318$032ce690$0400a8c0@xp2500>
From: "Mark Shaum" <k9tr@dtnspeed.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Audio Driven AGC.
Date: Mon, 18 Dec 2006 20:47:23 -0600
MIME-Version: 1.0
Content-Type: text/plain;
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An option I used in my rather wildly solid-stated SB-301 in the early 80's was to have a fast AGC attack derived from the IF signal but have the hang capacitor charge up from the recovered audio. I kept as fast of an attack I could manage without huge overshoot and just varied the hang time to suit between CW and SSB. The decay time was fixed after the hang interval was up, fairly fast to allow for reasonable between-character break in on CW. I seem to recall the IF strip used a pair of Motorola MC-1590's and the general design was based on something W7ZOI had published. It worked well, in fact that receiver is still in my Morton building, complete with the AGC detectors breadboarded on one of those multi-hole breadboard strips hot-melt

glued to the chassis bottom! Might try to revive it to compare with my stock SB-301 someday.

Mark K9TR

----- Original Message -----
From: "James C. Garland" <4cx250b@muohio.edu>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Monday, December 18, 2006 7:16 AM
Subject: Re: Audio Driven AGC.

>
> Hi Ken,
> I can't give you an article reference, but I have quite a bit of
> experience with audio-derived AGC, which was somewhat popular in the 60s
> and 70s. I'm not sure that's the same thing as "audio driven" AGC, but
> it's an interesting topic even if it's not.
>
> The idea is to pick off the AGC voltage at the audio stage, after the
> signal has been filtered and detected. The AGC voltge is then used to
> control the gain of the previous IF and RF stages. There are a number of
> simple circuits for doing this, but the most interesting and advanced
> audio AGC circuit was an intergrated circuit made by Plessey
> Semiconductors, back in the late 60s. I believe there were two versions.
> The Plessey 620 was for receivers, and the Plessey 621 was for use in
> speech compressors. Both ICs had similar features.
>
>

End of BOATANCHORS Digest 3985
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